

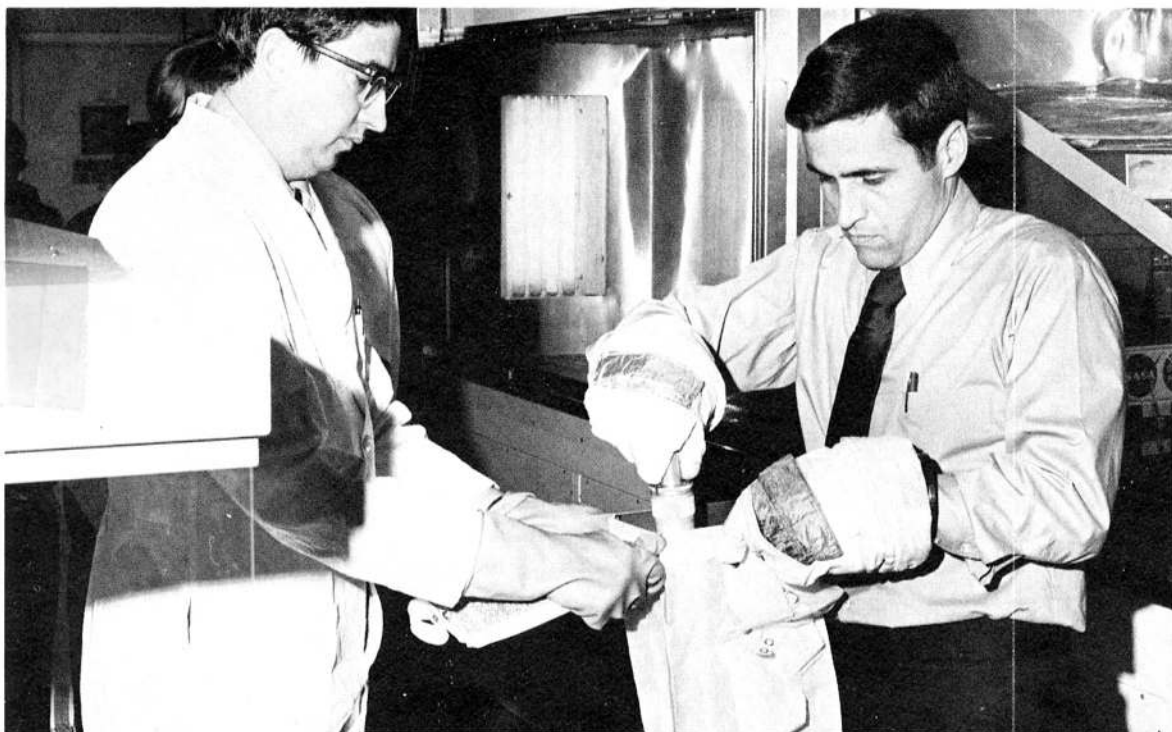
NUCLEAR DIVISION NEWS

UNION
CARBIDE

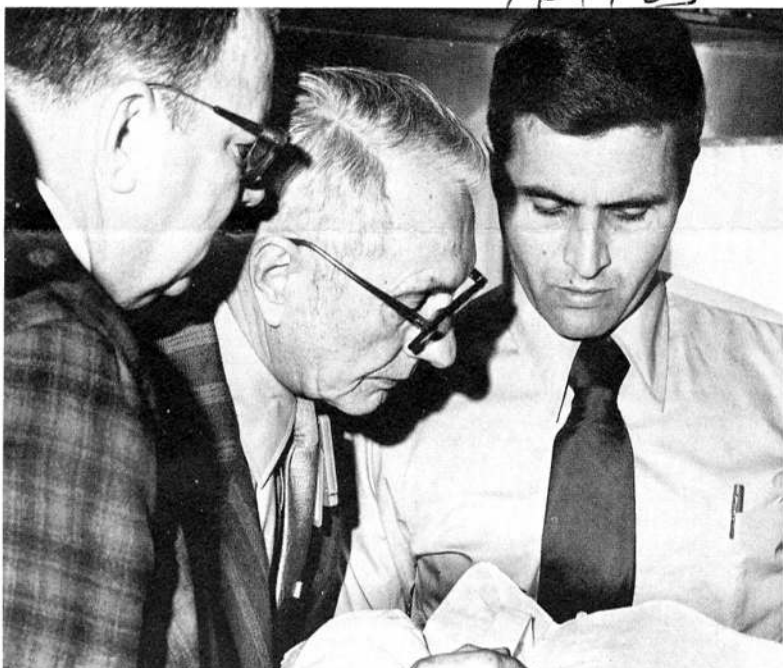
A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 3 — No. 4

Thursday, March 9, 1972



ASTRONAUT VISITS—Astronaut Harrison H. Schmitt, scheduled to be the LEM pilot for Apollo 17, visited in the Oak Ridge Y-12 Plant recently to work with some of the equipment he will use on the moon mission. Above, he works with Y-12er Charles McAllister, left, placing an environmental sample container into a sample collection bag.



INTENT ANALYSIS—Ward Wampler, George Lockhart, and Harrison H. Schmitt examine some of the material to be used on the final Apollo mission, tentatively set for launch in December. Schmitt, a graduate from Harvard with a Ph.D. in geology, will be the first civilian astronaut to explore the moon's surface.

R. F. Hibbs Heads Savings Bond Drive For 3-County Area

Roger F. Hibbs, President of the Nuclear Division of Union Carbide Corporation, has been named local area chairman of the "Take Stock in America" campaign.

Hibbs is to lead the area's payroll savings campaign in 1972, according to Franklin M. Jarman, state volunteer chairman for Savings Bonds. His mission will be to stimulate the regular purchase of Series E Bonds by employees in Anderson, Blount and Knox Counties. Companies will be urged to sign up at least one of every two employees not taking part in the payroll savings plan and to obtain an increase in allotment from at least one of every two employees who are currently enrolled in the plan.

The week of April 24-28 has been designated "Take Stock in America" in the three-county area. A goal of 5,000, either new savers or increased allotments, has been set.

Corporate Sales, Earnings See Little Change in 1971

Union Carbide Corporation's sales and earnings for 1971 were about the same as in 1970. 1971 worldwide sales were \$3,035 million, compared with \$3,026 million in 1970. On the basis of preliminary figures, net income amounted to \$157 million, or \$2.60 a share, the same as reported in 1970. Income before extraordinary items in 1971 amounted to \$152 million, or \$2.52 a share, 3 percent below 1970 net income.

Extraordinary items of \$5 million, or 8c a share, included net gains of 21c a share, which were partially offset by net charges resulted from major revaluations and devaluations of the sale of Union Carbide's former petroleum subsidiary. The charge resulted from major revaluations and devaluations of certain foreign currencies, amounting to 10c a share, and from write-offs relating to fixed assets. In 1970, there were non-recurring charges of 18c a share and nonrecurring gains of 17c a share.

Quarter's Income Is Up

Union Carbide has decided to amortize the investment tax credit over the life of the related assets, in contrast to its "flow through" treatment in prior years. As a result, the investment tax credit applicable to 1971 was not significant.

For the fourth quarter, sales amounted to \$767 million, virtually the same as the 1970 fourth-quarter figure of \$768 million. Net income was \$40 million, or \$0.67 a share, after an extraordinary net credit of about 1c a share. The net income was 14 percent above net income of \$36 million, or 59c a share, reported in the fourth quarter of 1970.

In reviewing fourth-quarter earnings, it was noted that although the slump in sales of the domestic gases, carbons, and metals group brought about by the low level of steel production had continued into the fourth quarter, some recovery was apparent toward year-end. He added that unusual operating problems experienced during the third quarter had been largely corrected during the fourth quarter. In addition, fourth-quarter results were helped by favorable year-end adjustments.

Pickup in Fourth Quarter

For the year as a whole, operating earnings of the chemicals and plastics group in the United States showed a gratifying improvement over the prior year. However, this was more than offset by preliminary operating expenses, which had been expected, at the corporation's new petrochemicals complex at Ponce, Puerto Rico. This project is now in the early stages of start-up and present indications are that the testing and trial operations are going well.

It was reported that sales from domestic operations in 1971 totaled \$2,131 million, about 1 percent less than 1970 sales of \$2,156 million. Union Carbide's domestic business was affected throughout 1971 by the sluggish level of the economy; however, a slight pickup was noticed in the fourth quarter, during which sales ran about 1 percent ahead of the fourth quarter of 1970. For the year as a whole, sales of the chemicals and plastics group were slightly below those of the prior year, as were those of the gases, metals, and carbons group. The domestic consumer and related products group showed a gain in 1971, but somewhat less than had been hoped for.

Overseas Sales Increase

Turning to conditions overseas, it was noted that international sales grew by about 4 percent and that this figure would have been 10 percent had it not been for elimination of tin sales from consolidation during the second half of 1971. This change resulted from a reduction in the corporation's ownership in a tin smelter in the Far East from a majority position to a 50 percent position at midyear 1971. Tin sales had been running at the rate of approximately \$80 million per year. The effect of this change on net income was not material.

Sales gains abroad were greatest in Latin America and in the Far East. Sales in Europe ran approximately 10 percent ahead of 1970 during the first three quarters of 1971, but fell off somewhat at the end of the year.

(Continued on Page 8)

Mercury Removed by New Processing

A new air pollution control system to remove mercury from gas streams is now being marketed by Union Carbide Corporation. The new system will help chlorine producers meet the recently proposed federal mercury air emission standard of five pounds per day per plant.

The system is so effective that for a 300 ton per day chlorine plant, Union Carbide guarantees the new system will reduce the mercury in the final air and by-product hydrogen streams to less than one-tenth of a pound per day.

Called PuraSiv Hg, the new technology is a cyclic adsorption process that traps and recovers mercury in elemental form. A company spokesman observed that the new process appears to occupy a unique position among mercury removal systems de-

signed for mercury cell chlor-alkali plants. No salts or chemicals are used and, unlike some mercury removal processes, there are no secondary pollution problems.

PuraSiv Hg equipment is skid-mounted and is simple to install, start up, operate, and shut down. Operation is economical. Even when a PuraSiv Hg system treats a gas stream that already has had most of its mercury removed by existing processes, the value of the recovered mercury essentially balances the utility costs of the new system. The new equipment can be supplied four months after order.

Although the new system was designed specifically for mercury cell caustic chlorine plants, of which there are about 30 operating in the United States, it could be applicable for other processes

where mercury vapor is picked up in a vent stream.

The first PuraSiv Hg system will be installed at Sobin Chlor-Alkali's chlorine plant in Orrington, Me., in late April.

This is the latest in a series of advanced pollution control processes developed by Union Carbide. Late last year, two air pollution control systems — PuraSiv S and PuraSiv N — were developed for removal and recovery of sulfur dioxide and nitrogen oxide from sulfuric and nitric acid plants. About 30 municipalities are designing the Unox wastewater treatment process, introduced by Union Carbide in 1970, into their sewage treatment systems. And this January, the Corporation announced that it had developed a unique process for converting solid wastes into useful products.

Rouse Report Recommends Training in Human Relations

(The following is the second in a series of articles dealing with the Rouse Report on the Nuclear Division's Affirmative Action Program, as well as various aspects of this program.)

By Charles A. Blake

The first article in this series discussed the reasoning behind the Nuclear Division asking W. V. Rouse and Associates to conduct a survey of attitudes toward the Division's Affirmative Action Program. In addition, various comments by employees concerning the program were reported. This article is a continuation of the responses to the survey conducted by Rouse.

Promotions, or the chance for promotion, caused much employee comment. Rouse states that about one-third of the blacks interviewed said something like, "I could do more, but it doesn't seem to make much difference since promotions and pay don't seem to be related to performance." Employees sometimes felt that promotions may not come because poor appraisals are made and poor records are kept.

However, when asked, "Do you think you have a reasonable chance to move into the next job above yours?", one-half of the blacks and two-thirds of the whites answered, "Yes." Fifty-four percent of the women asked answered, "Yes."

One-third of the supervisors interviewed felt that they were under too much pressure to hire blacks, and the Rouse "gut reaction" here is that supervisors are more negative to black abilities than they will admit. When white employees were asked, "Do you think that, given the increased emphasis on blacks, the white employee is being neglected in any way?"—80 percent answered, "No."

The following section will seem like a session of "let's all jump on our supervisor for a while," but listen to some of the things employees and supervisors are saying:

- What's wrong with this Company? The supervisor, that's what.
- My supervisor is scared of black people on the job.
- Don't get me wrong, I think if Carbide knew what their supervisors are doing, things would change around here.
- My supervisor used bad language around the black women.
- There are two of us in the department — he watches us like a hawk.
- I get no feedback on my performance.
- I don't really know what to expect of them, I never had one before.
- I would like some training in people management skills.
- My supervisor is much harder

on weekly employees than he is on monthly. He should be told there are no double standards.

- My supervisor knows his job technically. (78 percent of the blacks and 90 percent of the whites said this.)
- My supervisor needs help in handling and working with people. (57 percent of the blacks, 47 percent of the whites)
- My supervisor needs help in handling blacks. (49 percent of the blacks, 30 percent of the whites)
- Whites get away with more than blacks. (48 percent of the blacks, 13 percent of the whites)
- Blacks get away with more than whites. (15 percent of the blacks, 29 percent of the whites)
- There are no racial problems company-wide. (37 percent of the blacks, 73 percent of the whites)
- There are no racial problems in my department. (56 percent of the blacks, 86 percent of the whites)
- I need some training in how to relate to blacks. (40 percent of the whites)
- The government is forcing Carbide to comply with the laws. (Supervisor's comment)
- Women can only progress to a certain level, but on the other hand, they shouldn't expect to go further. (Supervisor's comment)

Rouse states, "The supervisor who displays . . . few human relations skills has already affected the attitude and motivation of many employees, particularly blacks and women."

The Rouse Report recommends some important aspects of human relations. Examples are: analysis of cultural factors influencing employees' needs; the need for clear communication; learning to recognize discrimination; understanding group dynamics; understanding the decision making process.

Rouse recommends strongly that the Nuclear Division start training programs in human relations, especially for supervisors, and adds that the need is not for a "minority program." The report notes, however, there are no blacks on the training staffs at any of our installations and that we should seek outside assistance to improve in-house expertise. It is interesting that while the Nuclear Division has not been conducting any formal human relations training programs, 11 percent of the interviewees indicated they had been involved in this kind of training during the previous year.



AFFIRMATIVE ACTION IN Y-12—Recently Y-12's affirmative action committee met to discuss current problems in the Plant. Similar committees exist in the other three installations. From left are, James M. Seivers, David A. Jennings, William E. Williams, III; LeVaughn Davis, Robert A. Williamson, Chairman Herman G. P. Snyder, V. C. Jackson, Robert DeMonbrun, Leander E. Woods, Jr.; William G. Butturini, Fran V. Tilson, William E. Tewes, and J. Leo Waters.

Two-thirds of the blacks interviewed expressed the feeling that "As a black I've got less of a chance to move into management than a white of equal experience and education." One-third of the whites agreed with them. About 40 percent of the whites, however, feel that blacks have more of a chance.

Rouse notes that Carbide has not been using existing training programs to good advantage in developing blacks and women for entry into management and recommends aggressive moves in this direction.

"The objectives of such a program are to encourage qualified individuals, particularly minority group members and women, who desire administrative positions to make a career with Union Carbide; to provide such individuals with maximum opportunity to improve their capabilities; to provide a system for carefully selecting administrative trainees; and to improve opportunities for upward mobility within Union Carbide. Target positions must be identified at the same time that trainee positions are established. The program should cover the entire Nuclear Division and not be restricted to a single plant."

It is also noteworthy that one of every four employees asked (black or white) feels that Carbide can do a better job of telling employees of training opportunities available.

"I think there is equal opportunity for women at Carbide." Women who said this were in a very slight majority (57 percent). Two-thirds of the men agree with them.

Rouse states, "white secretaries and clerks interviewed felt that most of the black clerks aren't really qualified and that Carbide is being forced to hire them. Black clerical people interviewed feel they are over-qualified for their jobs but have little hope of reaching the secretarial level and no hope of going any higher."

In this respect, Rouse points to the educational backgrounds of the women office and clerical employees who were interviewed. In the secretary classification all of the black women had some college education or were college graduates, but seven of the 19 white women had no college edu-

cation. None of the ten white clerks interviewed was a college graduate, but six of the 25 black clerks were college graduates.

Rouse also observed that at the time of the survey there was no plan to develop women into management jobs.

"Carbide is an above-average employer." Eighty-four percent of the blacks and 93 percent of the whites said this when asked. Other results of general interest are shown below.

- Carbide does a good job of enforcing fair hiring practices. (61 percent of the blacks, 83 percent of the whites)
- Carbide is doing a good job with respect to safety programs, medical facilities, comparable pay scales, new employee orientation programs. (80-90 percent of all employees, black or white)
- Carbide should get involved in community problems such as housing. (72 percent of the

blacks, 44 percent of the whites) and health (79 percent of the blacks, 60 percent of the whites).

• Carbide's black and white employees have favorable and nearly identical opinions of a number of traits of character and ability possessed by all employees, black or white (performance on job, ability to learn, intelligence, honesty).

• Seventy percent of all employees feel that the drug problems have a significant effect on Oak Ridge, but that other current issues have much less effect: Peace Movement (33 percent); Viet Nam (39 percent); Hippies (38 percent); Black Militants (25 percent); Antipollution (44 percent).

Finally, when asked to rate Union Carbide as an Equal Opportunity Employer, three out of four black employees rated Carbide above average or average.



SOLID WASTES DISPOSAL—August P. Petrillo, mayor of Mount Vernon, N. Y., the city selected to be the demonstration municipality for Union Carbide's Oxygen Refuse Converter System, examines a jar of fused metal and glass slag. The slag is the end result after a quantity of inorganic solid wastes, enough to fill the garbage can in the foreground, was processed through the new converter system. At left is John E. Anderson, Union Carbide Development Fellow, who discovered the process, and Alec Flamm, Linde Division vice president and general manager, gas products.

NUCLEAR DIVISION NEWS



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NUCLEAR DIVISION

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— Member —

APPALACHIAN INDUSTRIAL EDITOR'S ASSOCIATION
INTERNATIONAL ASSOCIATION OF BUSINESS COMMUNICATORS

OFFICE

POST OFFICE BOX Y, OAK RIDGE, TENN. 37830

Purchasing's Mary Nelson Named President of ABWA

Mary Nelson, in the Paducah Plant's Purchasing Department, was recently named president of the local chapter of the American Business Woman's Association.

Mrs. Nelson has many other interests in the Paducah community, including membership in the St. Paul Lutheran Church, where she teaches Sunday school, and is a member of the Lutheran Layman's League of Radio Ministry Hour, a nationwide presentation.

The AMERICAN BUSINESS WOMEN'S ASSOCIATION (ABWA) is an educational association which was founded in 1949. There are nearly 1,000 chapters in the association, and over 60,000 members, located in all 50 states.

The major aims and purposes of this unique organization are designed to help women advance in the business world with emphasis on (1) improving employer-employee relations; (2) accelerating the advancement of women in business through more efficient service to business; and (3) keeping business women up to date on business techniques. The ABWA is not a sorority; not a club; but an educational association whose objectives complement rather than compete with those of other organizations. The ABWA believes that advancement and promotion must be earned, and it stresses this fact in urging its members to better themselves through education, either formal or informal, so that they will be qualified for future advancement.

The Association emphasizes the sponsoring of scholarships for deserving qualified women. During the past year, over \$350,000 in scholarships was awarded by the combined chapters of the association.

In addition to this, scholarships exceeding \$70,000 were awarded from the Association's national scholarship fund—the STEPHEN BUFTON MEMORIAL EDUCATION FUND (SBMEF). SBMEF is comprised of donations by chapters of the Association, interested individuals, and business associates. This is a non-profit fund, and donations are tax deductible within allowable limits. The Paducah Duchess Chapter is currently sponsoring two students at Paducah Community College.

Each year the association holds a district meeting in each of its six districts; also, a national convention is held each year in addition to the district meetings. The 1972 national convention will be held in Miami Beach, Fla. The "American Business Woman of the Year" is announced at this convention. Mrs. Barbara Orr, South Central Bell Telephone Co., is presently the "Woman of the Year" for the Duchess Chapter.



Mary Nelson

The association's national headquarters, which is located in Kansas City, Mo., is a non-union, non-political, and non-sectarian association.

Mrs. Nelson and her husband, Jim, another Carbide (he's in Purchasing) live at 257 Seminole Drive, Paducah. They have a son, Gary, who is assistant golf director at the Edgewood Country Club, Riverdale, N. J.

Golfers to Begin

All Paducah employees interested in participating in the Carbide Men's Golf League should register by calling the Recreation Department on PAX 335 or Bell 368. It is not necessary to be an expert golfer... old, young, good, not-so-good, and "never-played-before" golfers are invited to join the fun.

Teams will be formed by the golf committee using established handicaps from last year's leagues. New players will be placed on teams where they will establish their own handicaps.

It is hoped that the league can be started by April 18... so get your name in NOW. The league will be played at Paxton Park, Tuesdays at 5 p.m.

Flight 202 to Provide 'Flower' Power For Paducah Plant's Dance, April 28

April 28 will find the Paducah Civic Center splashed with vivid Spring colors and resounding to the delightful music of the youthful FLIGHT 602 as the Paducah Plant swings into the first of their 1972 dances.

The dance committee has chosen the theme "Flower Frolic" with "Flight 602" which will give Paducahans a hint of the festivities in store for them.

Advance tickets will go on sale shortly, and ducats will be \$1.75 per person. The prices will advance to \$2 at the door. Advance tickets will be sold until 4 p.m. at the Recreation Department on the day of the dance.

Start making plans now to attend the big April 28 affair, and bring some guests!

Future issues of the Nuclear Division News will bring additional information.

Supervisory Courses Set Thursday Nights

An eight-session course on "Effective Supervision" will be presented by Murray State University at the Paducah Community College campus on succeeding Thursday nights at 6:30 PM beginning March 9.

The classes will be conducted in Waller Hall, Room 112. Some of the key subjects will give more attention to "how to" techniques, and special workshops will deal with the supervisor and his job. The classes will be conducted by members of the School of Business faculty.

Preregistration was preferable, but registration can be made at the beginning of the course in the classroom.

The Spring Series consists of the following subjects:

Management: An Exercise in Leadership
Seminar in Supervision
Workshop in Leadership Styles
Employee Development
The Employee's Job and his Compensation
Seminar in Communications
Workshop in Decision Making
The Changing Role of the Supervisor

Dinner Meeting
Certification of completion will be given if the course is fully audited.

Kevil Residents Require Change of Address Forms

Recently, the Kevil Post Office moved to new quarters, and in the process, nearly all Paducah employees living in that community had a change in Route, or box number. In order that employees may get mail without delay, it is necessary for them to fill out a form UCN-4488, Address and Telephone Change, and give it to their supervisor for forwarding to the Office Services Department, C-100 Building.

The following employees are particularly involved:

Luther K. Shewcraft
John D. Tucker
Chester M. Hall, Jr.
Howard L. Gipson
James R. Benton
John R. Suppert
Robert E. Throgmorton
Johnnie Thompson
Barbara K. Hook
James M. Compton
William M. Moffitt

Randa Laird Is Named Tomorrow's Homemaker

Randa Elizabeth Laird, daughter of the Randall Lairds, Water Valley, has been named Wingo High School's Betty Crocker homemaker of tomorrow for 1972.

Randa was chosen on the basis of scores in a written knowledge and attitude examination taken by senior girls in Wingo High. She has received a special award from General Mills, who sponsor the annual educational program. She was recently notified that her entry is among the highest 25 in Kentucky, and that she is being considered by Science Research Associates for the \$1,500 Betty Crocker scholarship.

Randa is active in many school activities, including the Beta Club, FHA and serves as editor of the school annual. She has been named the outstanding senior girl of the 1972 graduating class.

Laird is in Paducah's Fabrication and Maintenance Division.

Paducah Gaseous Diffusion Plant

Paducah Editor Keith Bryant
extension 369

FAMOUS ATOMIC SCIENTISTS

LIKE MANY OTHER GERMAN SCIENTISTS, HE OPPOSED HITLER'S NAZI REGIME AND WAS FORCED TO LEAVE HIS NATIVE LAND.

HE SOUGHT REFUGE IN GREAT BRITAIN WHERE HE TAUGHT AT CAMBRIDGE AND UNIVERSITY OF EDINBURGH UNTIL HIS RETIREMENT IN 1953

HE COLLABORATED WITH THE GREATEST SCIENTIFIC MINDS... SHARED IN THE BORN-OPPENHEIMER THEORIES OF MOLECULES

HE CONTRIBUTED TO THE SCIENTIFIC STUDY OF CRYSTALLOGRAPHY — A PIONEER IN SOLID-STATE PHYSICS

1882-1970 **MAX BORN**

GERMAN PHYSICIST—WHO SHARED THE 1954 NOBEL PRIZE IN PHYSICS FOR HIS STATISTICAL STUDIES OF WAVE FUNCTIONS. STUDIED AT UNIVERSITIES IN GERMANY, RECEIVING A DOCTORATE AT GÖTTINGEN IN 1907. HIS RESEARCH ON WAVE FUNCTIONS LED TO A REPLACEMENT OF THE OLD THEORY. HE CONTRIBUTED TO ATOMIC SCIENCE THE MATHEMATICAL BASIS OF QUANTUM MECHANICS. DURING RETIREMENT, HE WROTE MANY ARTICLES ON THE RESPONSIBILITY OF SCIENCE REGARDING THE USE OF ATOMIC ENERGY IN WAR OR PEACE.

Retirement Rules Listed by Spouse

Listed below is a set of rules posted by the wife of an imminent Paducah retiree. This can give a lot of us something to think about:

- Stay out of my kitchen.
- Make a list of chores you intend to take over.
- Start cleaning the ashtrays and messes that you make during the day. I'll take care of them in the evening.
- Give me two afternoons per week off to be with my women friends.
- Have your eyeglasses checked, then subscribe to another newspaper. We are going to have plenty of conversation time, and news will help us use it to advantage.

- Tell social security to send my check in my own name. It's the first money I've ever had of my own, and I want to know how it feels.
- Set up an account in a bank of a few hundred dollars in my name in case an emergency arises and I have to face it alone.
- Read your life insurance policies and tell me what they say.
- Make a will.
- You have one month to feel sorry for yourself, after which you must get on into your new life. I'm glad to have you home in retirement. As soon as we get acquainted, I'm sure we shall have a splendid life.

'Joyful Noise' Can Cause Us Real Pain

According to the UCC TIP SHEET, sound is energy. It has been used to destroy rock formations, mix paint, and wash dishes.

This energy can have some surprising—even painful—effects on the human body.

At 90 decibels — about the level of a noisy kitchen — sound causes your blood circulation to increase. It causes your eyes to close and your pupils to dilate. It reduces the flow of saliva and gastric juices, and it increases the flow of adrenalin into your blood stream.

At about 120 decibels — the noise level near an air hammer — your ears begin to feel discomfort.

At 140 decibels—the level of sound near a jet aircraft — your ears would actually feel pain.

At 141 decibels—I hope sincerely that my wife reads this...

Pacemaker Batteries Go Nuclear for Longer Life

Pacemaker batteries are going nuclear. The Hittman Corporation has announced a new subsidiary, Nuclear Battery Corporation, to manufacture a line of long-lived nuclear batteries trademarked "Atomcell."

The major use will be in implanted heart pacemakers.

Estimates indicate that over 100,000 pacemakers are implanted annually worldwide. A potential market of tens of thousands of batteries is projected for nuclear powered pacemakers at a mass production price of \$1,000 to \$2,000 per battery.

SAFETY SCOREBOARD

PADUCAH EMPLOYEES

Have Worked

695,000 Safe Hours

Through March 2

Without a disabling injury.

Oak Ridge Gaseous Diffusion Plant

ORGDP Editor Doug Carter
extension 3-3017



Dr. Brent Burkett

Burkett Son Takes Memphis-UT M.D.

Brent Burkett, son of Mr. and Mrs. Dennis Burkett, Concord, Tenn., recently received his Doctor of Medicine degree from the University of Tennessee Medical Units - Memphis.

Burkett is a member of Phi Rho Sigma professional medical fraternity. He and his wife have moved near the nation's capitol, where he has assumed a three-year residency in family practice at Malcolm Grow Medical Center, Andrews Air Force Base, Maryland.

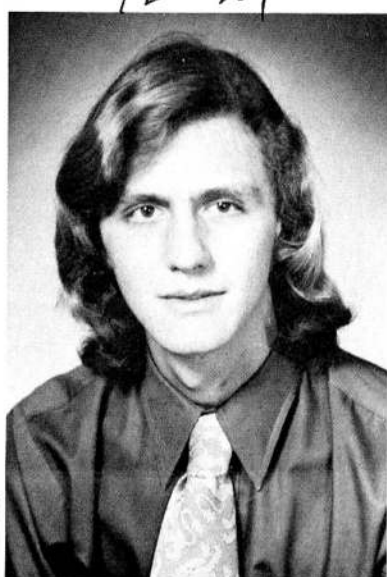
The new doctor's father is in ORGDP's Materials and Systems Development Department of the Gaseous Diffusion Development Division.

Operations Section Promotes DeVillez

The Operations Division has announced the promotion of James S. DeVillez, named an inspector trainee in the Barrier Manufacturing Department.

A native of Paducah, Ky., DeVillez attended Southern Illinois University, Paducah Community College, and Murray State University.

He lives at 112 East Hunter Circle, Oak Ridge. Among his hobbies are automobile racing and collecting and assembling stereo equipment.



James S. DeVillez

SAFETY SCOREBOARD

ORGDP

Has Operated
754,000 Safe Hours
Through March 2

Since last disabling injury January 7

"A life of ease is a difficult pursuit."—William Cowper



WILL JOIN CAR POOL from West Knoxville, Hidden Valley section, to Portal 2, 7:45 to 4:15. Carolyn Sams, plant phone 3-3046.

RIDE WANTED or will join car pool from Maryville to Portal 4 or 5, straight day. Ed Crowe, plant phone 3-3396.

Scout's Eagle Award Goes To Harrel's Son

Craig Harrel, 16, son of Mr. and Mrs. Hicklin A. Harrel, Oak Ridge, was awarded the Eagle Award at a special Court of Honor recently held by Explorer Post 220. He is a junior at Oak Ridge High School and a former member of Troop 220. Both Troop 220 and Explorer Post 220 are sponsored by the Christian Men of Oak Ridge. Craig is a member of the Order of the Arrow, the Scouting camping fraternity.

Craig earned the mile swim award several times and is a Scout lifeguard. He won the 50-miler award by canoeing 50 miles down the Little Tennessee River, and has hiked extensively over the Appalachian Trail inside the Great Smoky Mountains.

Craig's father is a member of AECOP (Atomic Energy Commission Combined Operations Planning), a multi-contractor group administered by Union Carbide for the AEC.

20 Years Service

Joe E. Keene
Richard W. Nichols
Paul G. Brownman
Arthur Hopson
Howard L. Fore

Scout's Eagle Award Goes To Harrel's Son



Craig Harrel

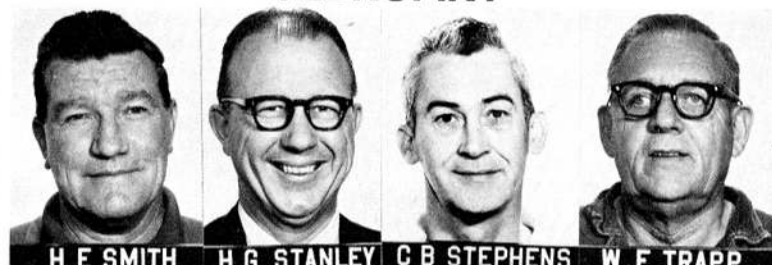
Golf Calendar-ORGDP

April 22 SW Point
Kingston
May 20 Wallace Hills
Maryville
June 24 Cedar Hills
Lenoir City
July 22 Whittle Springs
Knoxville
September 9 Gatlinburg

20 Years Service

Luther H. Hampson, Jr.
Everett L. Halstead
Kyle B. Davis
Emerson J. Moore

25-Year Veterans FEBRUARY



H E SMITH H G STANLEY C B STEPHENS W E TRAPP



W A BOGDANOWICZ E V BOGLE C D HAWKINS R T RIDDELL

MARCH

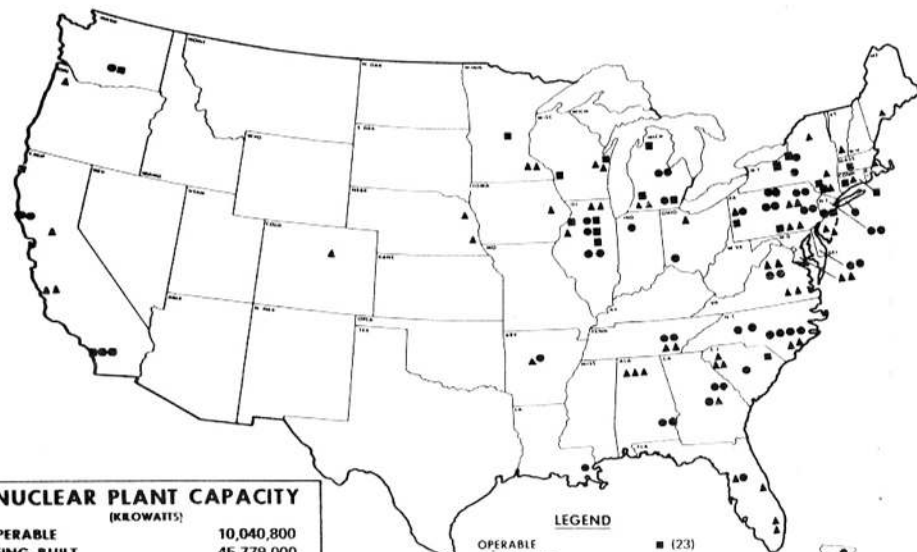


W F BARGER L H BELL B JONES W R JOHNSTON



V O MAGGART JR C M TAYLOR M E THOMAS C W WARWICK

NUCLEAR POWER REACTORS IN THE UNITED STATES



NUCLEAR PLANT CAPACITY

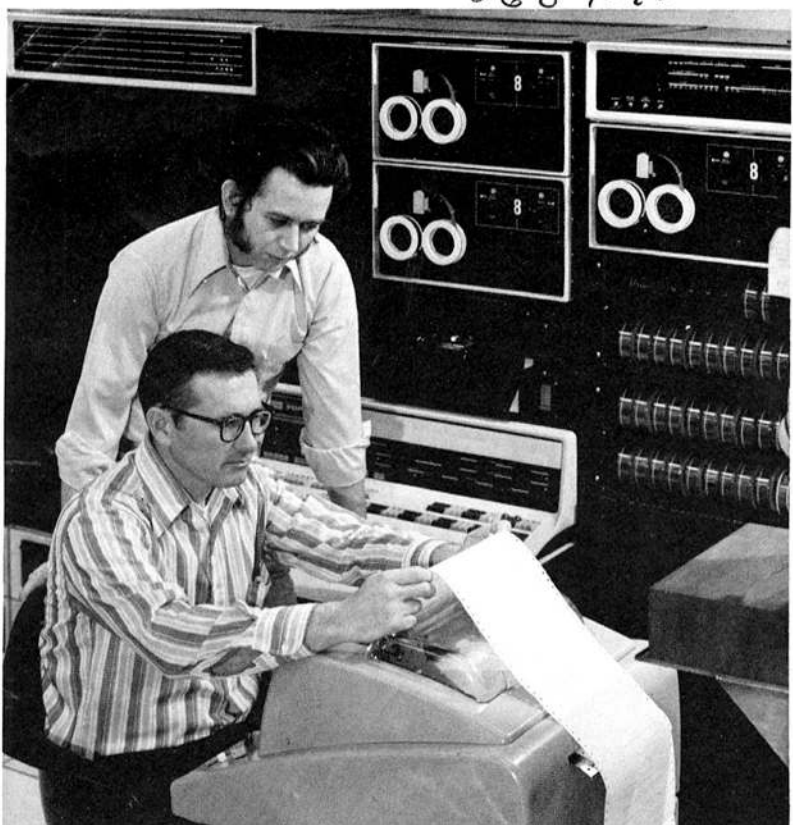
	(KILOWATTS)
OPERABLE	10,040,800
BEING BUILT	45,779,000
PLANNED REACTORS ORDERED	51,571,000
TOTAL	107,390,800

TOTAL ELECTRIC UTILITY CAPACITY AS OF SEPTEMBER 30, 1971: 357,721,607 KILOWATTS

LEGEND

OPERABLE ■ (23)
BEING BUILT ▲ (54)
PLANNED (Reactors Ordered) ● (52)

U.S. Atomic Energy Commission
December 31, 1971



AT THE CONSOLE—Mathematics Division's Robert Finch and Sherrill Smith (seated) read communications from the new Digital Equipment Corporation-System-10 computer. The computer, recently finishing acceptance tests, is now in routine operation.

New Computer System Passes Acceptance Tests at ORNL

A new computer system has completed acceptance tests and has now been placed in routine operation at ORNL. It is one of the largest systems ever assembled by Digital Equipment Corporation, a \$1.4 million combination of hardware and software.

The system will be used to analyze data from experiments performed with the Oak Ridge Electron Linear Accelerator (ORELA) and to coordinate communications between several other computing systems and the Central Computing facility operated by the Mathematics Division.

The system is made up of a large-scale DEC-System-10 computer that will coordinate the operation of the system; a medium scale PDP-15 (Programmed Data Processor) computer that acts as a communications controller; and four of DEC's Graphic-15 display systems, each with its own central processor. In addition, remote interactive teletype terminals will be tied into the DEC-System-10 for scientific and engineering calculations.

The PDP-15 communications controller is connected to the IBM 360/75 at the Central Computing facility, a data acquisition computer (SEL 810B) at ORELA, a data acquisition computer (SEL 840A) at ORIC, Reactor Division's remote job entry terminal (IBM 2780) and the four display systems. The communications PDP-15 will coordinate job streams and data between the DEC-System-10 and the other computers and terminals.

Data from past experiments will be stored on disk files, while data from experiments under way at ORELA can be sent immediately to the DEC-System-10. During an experiment a researcher will be able to call up data from past experiments, display them as curves on the Graphic-15 terminals and compare them with data collected from an experiment in progress.

The basic graphic and communication software for the system

was written by Digital Equipment Corporation; the higher level graphics and communication software is being written by Mathematics Division programmers.

The interactive display and computing power of the system are expected to allow a faster and more thorough analysis of the large data sets involved in the ORELA work. The data from several time-of-flight experiments will be analyzed simultaneously. These data are now analyzed in a batch mode at the Central Computing center.

The DEC-System-10 computer that forms the core of the system is equipped with 98,304 words of core memory, 70 million words (300 million 8-bit characters) of disk storage capacity, two magnetic tape units, three DEC tape units, a card reader, a card punch and line printer.



RUSSIAN GEOCHEMIST VISITS ORNL—Boris N. Ryzhenko, right, recently visited with ORNL chemists during his nine-month exchange program for research in the United States. Ryzhenko had previously become acquainted with William L. Marshall, left, during Marshall's attendance at the International Geochemical Congress in Moscow in July 1971. Also conferring with Ryzhenko are Leroy B. Yeatts, second from left and Arvin Quist, second from right. Ryzhenko examines conductance cells used in high-temperature aqueous electrolyte studies.

Energy Policy Series Continue at ORNL

Four more sessions of the seminar series entitled "Issues Associated with the Use of Energy: Toward a National Energy Policy" remain including the one scheduled today March 9.

In today's seminar Harry Perry, senior specialist in the Environmental Policy Division of the Legislative Reference Service of the Library of Congress, will speak.

On March 23 the speaker will be Michael McCloskey, executive director of the Sierra Club.

For the April 6 seminar, Joseph C. Swidler, chairman of the New York Public Service Commission, who has been active in both federal and state governments in the regulation of gas and electric utilities, will speak.

On April 20 the series will be wound up with the series' coordinators, Eric Hirst and Don Steiner, presenting a concluding seminar which will summarize the previous discussions.

All seminars will begin at 3 p.m. in Central Auditorium of Building 4500 North on the indicated dates.

Two ORNL Retirements Set for End of March



Reed

Ailshie

Congratulations and best wishes to Marion L. Ailshie and Edwin A. Reed who will be retiring at the end of March.

Ailshie is a reproduction clerk in General Engineering Division. He joined ORNL in September 1943. You'll find him doing a lot of work around his home at 1828 Wonderland Lane in Knoxville after retirement.

Reed plans to "play his retirement by ear." A design supervisor in General Engineering Division, he came to ORNL in September 1946. He lives at 7228 Wellswood Lane in Knoxville.

Oak Ridge National Laboratory

ORNL Editor Martha Goolsby
extension 3-6421

ORNL Library Head Accepts IAEA Appointment in Vienna

Ray Dickison, ORNL chief librarian, has accepted a two-year appointment with the International Atomic Energy Agency in Vienna, Austria. The position is that of First Officer, Division of Scientific and Technical Information. In this capacity he will manage the Agency Library and advise the director of the division of library matters. He will assume his new duties in Vienna in April.

The library is an integral part of the Agency, which has a statutory mandate from the United Nations to foster the exchange of scientific and technical information on the peaceful uses of atomic energy. The library receives annually about 600 requests for information from 102 member countries and distributes about 3,000 publications each year. It also serves as a training center for library personnel from member states. During the past year, there were six trainees from five countries.

Dickison holds degrees from Colorado College, Case Western Reserve University and Pennsylvania State University. In 1967 he acted as Director of Technical Information at the U. S. Atoms in Action Exhibit in Panama and in 1968 and 1969 in the same capacity at similar exhibits in Caracas, Venezuela, and Sao Paulo, Brazil. He has been chief librarian at ORNL since 1955. Previous to that, he was head librarian at the Colorado School of Mines and assistant director of libraries at the University of Florida.

During Dickison's absence Jack M. Bobb will be acting chief librarian and will retain responsibility for ORNL's branch libraries. Lois Morris will become assistant chief librarian with overall responsibility for the Central Research Library.

Other library changes include Elizabeth Howard and Janice Blanton. Elizabeth Howard will become head of the expanded Reference and Circulation Section and Janice Blanton will become head of the Y-12 Technical Library.

Jack Bobb moves from his present position as assistant chief librarian. A graduate of Penn State and Carnegie Tech, he has been at ORNL for 16 years. He is a member of the Special Libraries Association and the Tennessee Libraries Association.

Lois Morris, who has been with ORNL for 17 years, was the circulation and reference librarian. She is a graduate of Simpson College and the University of Illinois Library School and is a member of the Special Libraries Association.

Patents Received

Lloyd L. Brown for a "Chemical Exchange Method of Concentrating Carbon Isotopes."

Joseph P. Hammond for a "Dispersion Strengthening of Aluminum Alloys by Reaction of Unstable Oxide Dispersions."

Allen M. Veach and William A. Bell Jr. for a "Canted Magnetic Field for Calutron Ion Source."

"Our national flower is the concrete cloverleaf." — Lewis Mumford



Ray Dickison

Company Service

25 YEARS

George B. Dinsmore, James W. Dennis, Everett L. Sharp, Ray F. Benson, Edward M. King, Patricia M. Rowan, Charles A. Gifford, James A. Cain, Floyd M. Glass, Howard T. Russell, Johnnie H. Cline, William S. Lyon Jr., Charles R. Guinn, David W. Cardwell, O. G. Stone, Nathan H. Land, Earl S. Spores, Frank N. Browder.

20 YEARS

Robert M. Beckers, John R. Parrott, Little Copeland, Henry Inouye, John J. Keyes Jr., Anthony I. Krakoviak, George I. Cathers, Herman R. Queener, Maurice D. Allen, Paul L. Jude, Richard W. Ladd, Robert A. Weeks, Homer G. Baker, Nathan B. Carr Jr., James R. Collins, Robert W. Horton, Paul E. Woods, Jim C. Guinn, Herman M. Jackson, Ray Eskridge Jr., Don T. Dice, Clayton Lide, Glenn E. Davis, Roy E. Hicks, L. Ralph Gitgood, Andrew H. Matthews, Harvey A. Mahlman, Jack D. Richardson, Billy D. Martin, Gene R. Hicks, Oscar J. Harmon, Jack A. Powers, Paul H. Harley, Alex A. Garrett, Robert C. Osborne, and Frank A. Ferrari.

WANTED

Rides Car Pools

CAR POOL MEMBERS from UT area to South Portal, 8:15 a.m. Dick Snyder, 3-1922 or 522-0940.

CAR POOL MEMBERS from vicinity of Waddell, West Outer, Pennsylvania or Utah to East or North Portal, 8:15 a.m. Tom Burnett, 3-6939 or 483-1975.

CAR POOL MEMBERS from West Hills to East, West or South Portal, 8 a.m. Leon Fair, 3-6775 or 693-3211.

RIDE from Washington Pike area (Knoxville) to East Portal, either shift. Steve Makres, 3-1421 or 522-5692.

Oak Ridge Y-12 Plant

Y-12 Plant Editor James A. Young
extension 3-7100

Academy Appointment Goes to Y-12er's Son



Eddie Guy

There was cause for celebration recently in Paul E. and Mary Guy's home in Oak Ridge. (Mary is in Y-12's Technical Information Services.)

An announcement came from U. S. Representative Joe L. Evins' office that their son had received a recommendation for admission to the United States Military Academy at West Point.

Paul Guy, Jr., is a senior at Oak Ridge High School majoring in social studies. He plays the trumpet in the high school band and is vice president of the school's Projectionist Club. He works parttime after school at McDonald's.

Paul told the Oak Ridger last week that he decided to try for the appointment to West Point when he was in the ninth grade. "I was a below average student in junior high school but I got interested in West Point so I started working hard. In high school I made good grades and got into some advanced classes."

Guy says he probably has a "B" average in school now. He is active in church programs and received recognition for his scholarly activities at his church summer camp one year.

He must pass rigid physical and scholastic tests to qualify for the academy appointment. But, at least, part of his dream has come true . . . he has gained the recognition for the appointment!

'Boating' Course Set By Power Squadron

The U. S. Power Squadron has spent \$150,000 revamping its educational program, and the new material is available to people in this area.

The course name has been changed from "Piloting" to "Boating," which more closely describes the inland skipper's interest. Some of the changes in the piloting course include dropping some of the sessions on customs, flat etiquette, etc., which are normally associated with large yachts. A "Small Craft" chart is now used for chart work instead of the large coastal chart previously used, and a session on "Boat Trailing" has been added.

The new boating course is being offered for the first time at the Oak Ridge High School, beginning at 7:30 p.m. March 23, in room A-205.



25 YEARS

Harvey L. Cox
Howard L. Hay
Fran M. Tench, Jr.

20 YEARS

Leland E. Browne
William A. Moles
Richard W. Hayes
Edwin M. Bittle
Charles O. Henderson
Alexander Berry
Howard L. Wagner
James A. Davis
Ann H. Rackley
Frank Marlin
Larry R. Phillips
Samuel Kite
Ramond M. Lawson
Dorothy K. Pruden
Chester Crowe
Bill I. Leinbart
Harry L. Woodard
James D. Sweeney
Bruce F. Hayes, Jr.
Sebron S. Coleman
Earl T. Taylor
Billy R. Disney
Arthur J. Hines
Talmadge C. Hudson
Willie P. Crouse
Norman J. Roberts
Lillian F. Williams
Neal Dow
Daniel H. Palkowski
Len C. Hutchison
Joseph L. Ailey
Otis D. Miller
John Lay, Jr.
Watson H. Roberts
George E. Dabney
Loren M. Steckler
Harley H. Buckner
Abram Gosen
Albert J. Taylor
Sammie R. West
Alexander K. Johnson, Jr.

"Every noble activity makes room for itself."—Emerson



NEW OFFICERS—The Oak Ridge Chapter of the American Association of Retired Persons boast many Union Carbide veterans as new officers. In the front row, from left, are Frances Huson, corresponding secretary; Velma Collett, first vice president; Leighton Fuller, president; Geraldine Addison, second vice president; Nell Parks, recording secretary; and Joe Marshall, director. In the back row are Harold Ditchen, treasurer; Lester Spray, director; Sam Taylor, assistant treasurer; and Frank Cheney, Nashville, AARP state director.

Technical Papers are Set By McIntyre and Mundt



McIntyre

Mundt

Two Y-12ers will be giving papers this month. John M. McIntyre, a chemist in Chemistry Development, spoke to the North Carolina Agricultural and Technical University at Greensboro, on March 2. His subject was "Corrosion, the Enemy that Grows."

Fred D. Mundt, a physicist in Physical Testing, is presenting a technical paper at the American Society for Nondestructive Testing Conference in Los Angeles,

WANTED Rides Car Pools

Ride wanted from Paint Rock Ferry Road, Kingston, to West Portal, J Shift. J. A. Curtis, plant phone 3-7529, home phone Kingston 376-9501.

Ride wanted from West Haven section, Knoxville, to Bear Creek Portal, straight day. Pat Parrish, plant phone 3-5007, home phone Knoxville 522-4958.

Ride wanted from Dixie Lee Highway Junction, to West or Central Portal, straight day. Loren Carey, plant phone 3-7763, home phone Lenoir City 986-3152.

March 13-17. Mundt's subjects will be "Eddy Current Measurement with a Coil Encircling a Two-Conductor Rod."

Two Additional Y-12ers Listed in Retiree Roles



Coughlen

Mrs. Sigmon

Two additional Y-12ers retired February 29, bringing the total to six for the month. They are Charles P. Coughlen, Metallurgical Development; and Eva H. Sigmon, Alpha Five Processing.

Coughlen, a native of Indianapolis, Ind., worked at all three of the Oak Ridge installations. He hired in March 16, 1944, and transferred to Y-12 from ORNL March 1, 1956.

He graduated from the University of Cincinnati, and worked at the Pennsylvania Ordnance Works, Standard Brands and Jersey Cereal before coming with Union Carbide.

The Coughlens live at 330 West Outer Drive, Oak Ridge. Mrs. Coughlen, the former Doris Wafenschmidt, retired from ORNL recently. They have two daughters, Doris Arnold, Dayton, Ohio; and Carolyn Ramey, in Maine; and a son, Charles P. Jr., St. Paul, Minn. They also have eight grandchildren.

The other retiree in February from Y-12 was Eva H. Sigmon. Born, Eva Holly, in Reepsville, N. C., she came here September 13, 1944, after being a housewife in Loudon, Tenn., where she now lives.

Mrs. Sigmon has a son, David, Lenoir City, and a daughter, Bes-sie Hashe, Niota.



WORLD PRESS FELLOWS—World Press Institute Fellows, representing 11 countries visited the Nuclear Division facilities recently on an extensive tour of the United States. Seated from left are, Dick Khumulike, Malawi; Else S. Cortzen, Denmark; James V. Toscano, WPI director; Magdalena Saldana, Mexico; and Yuki Ichi, Japan. Standing are Cesar Ivancovich, Argentina; John Smolinski, WPI; Ali R. Farahmand, Iran; Steve Gorchala, partially hidden, WPI; Michael Heney, Ireland; Alvin W. Weinberg, director of Oak Ridge National Laboratory, one of the speakers; Mark Stedman, program director for WPI; Paul Stierli, Switzerland; William Goff, Australia; Sule Raji, Ghana; and Sudhir Thapliyal, India. The nine months program, sponsored by the WPI, includes intensive study, internships as well as travel.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
138 Days Or
4,943,000 Man-Hours
(Unofficial Estimate)
Through March 5
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY

Another Smoking Hazard

By T. A. LINCOLN, M.D.

One of the neglected culprits in cigarette smoke is carbon monoxide (CO). Nicotine and "tar" have received most of the attention because of their role in chronic lung disease and cancer.

That thousands of deaths occur each year from carbon monoxide poisoning is well known. What is not generally appreciated is the toxicity of CO at levels of exposure which do not cause obvious symptoms.

The hemoglobin of the blood has 300 times more affinity for carbon monoxide than it does for oxygen. When the hemoglobin combines in the lung with CO to become carboxyhemoglobin (COHb) it can no longer transport oxygen. A few people can survive for as long as a week at levels of COHb as high as 20-40 percent. Most, however, will develop headache and mental dullness at about 30 percent and will lose consciousness and die at somewhat slightly higher levels.

Cigarettes—Auto

The two principal sources of exposure to CO are cigarette smoke and automobile exhaust. Numerous studies of COHb levels have been made on nonsmoking policemen patrolling busy city streets and vehicular tunnels. During a work day, their COHb level

often increased from a background of about .5-1 percent to 2-3 percent. This level is not usually regarded as toxic, but it may have subtle effects on the central nervous system, especially on vision.

In a study of COHb levels in over 3,000 longshoremen, those who were considered moderate smokers (10-39 per day) had a median COHb level of 5.9 percent and those considered heavy smokers (more than 40 a day) had 6.9 percent.

The formation of COHb has the same effect as high altitude. The oxygen available to the body after inhaling three cigarettes is about the same as the oxygen available at an altitude of 7500 feet.

The Starved Heart

The circulation to the heart muscle is especially sensitive to a diminished oxygen supply. In other parts of the body, only about 25 percent of the oxygen delivered by the blood is extracted. The remaining 75 percent serves as a reserve supply. During periods of greater need, such as during exercise, more can be extracted from this reserve.

In the coronary circulation, 75 percent of the oxygen is extracted at rest and there is little reserve. In order for the heart muscle to get extra oxygen during periods of stress, the flow of blood must be greatly increased. It can be accomplished by dilating the coronary arteries and increasing the heart rate.

Patients with atherosclerosis lose their ability to dilate their coronary arteries quickly and easily. Their arteries have become rigid and "rusted" with calcium and cholesterol.

In an area of heart muscle supplied by an artery that is partially blocked, the flow cannot be increased enough to meet the need. More oxygen is extracted but the reserve is rapidly exhausted. If a large part of that reserve is already tied up as COHb, a severe oxygen deficiency occurs sooner. The muscle starved for oxygen may set off a chaotic rhythm disturbance, such as a fibrillation, which can be fatal. This mechanism for a heart attack is far more common than generally appreciated.

'Flying' Is Risky

Detecting significant blockage in the coronary arteries in the absence of any symptoms or electrocardiographic changes is difficult. As everyone knows, patients have had fatal heart attacks only a few days after a negative physical examination. Because no one past 40 can be completely confident of his coronary circulation, he would be prudent not to gamble with heavy cigarette smoking. Such prudence is obviously more important if a person is known to be prone to coronary heart disease because of a family history, high cholesterol, elevated blood pressure or diabetes, or if he already has had a heart attack.

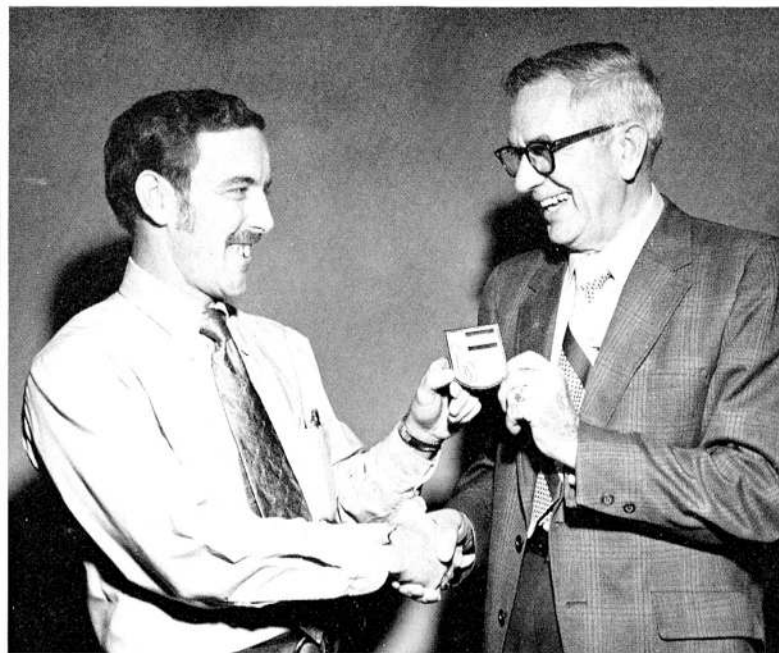
The cardiovascular effects of carbon monoxide are clearly the most important. Nevertheless, the subtle effects on vision,

Golfers Gear for Summer Leagues Throughout Area

"For lo, the winter is past," and golf is again the word throughout the Nuclear Division. Last issue of **Nuclear Division News** saw a schedule of ORNL and Y-12 tournaments for the spring and summer, and in this issue, a schedule for ORGDP is given. Also announcement of a start-up of a league at Paducah is announced.

In Oak Ridge, the point quota system will be used for scoring in the three plants' tournaments this year. Golfers in Y-12, and ORGDP will have their points computed by using the handicap for the last five tournaments played. Tee-off time applications will appear in **The News** prior to each tournament. The application must be filled out completely and returned to the appropriate Recreation Office. Deadline for entering will be at 4:30 p.m. on the Wednesday preceding each particular tournament.

More details will follow in subsequent issues of **The News**. Meanwhile, happy golfing!



TRIPLE PATCH AWARD—Dick Brothers, right, received a triplicate patch recently from the American Bowling Congress, for rolling three games of the same score in a series—170 each game! John J. Sewell, left, presents Brothers the award. Sewell is secretary-treasurer of the C Bowling League. Brothers bowls for the Rounders in that league.



SPORTS NOTES



ALL CARBIDE

In Carbide Family Mixed bowling Tears and Beers took honors with a 2,299 high handicap series. Charles Thompson, of Tears and Beers, sewed up the men's honors with a 526 HCP series, a 215 scratch game and a 243 HCP game. Al Adams of Pinsetters cornered women's honors with a 620 HCP series, a 190 scratch game and a 229 HCP game.

The Carbide High-Powered Rifle League has scheduled its 1972 league play beginning March 25 and running through July 22. All matches will be held on Saturday mornings and all dates are subject to cancellation if bad weather prevails on the day of the match. The league is open to any employee of Nuclear Division. For complete information on league matches, rules and regulations contact H. W. Bertini, 3-6095, J. E. Brewer, 3-3206 or C. G. Brewster, 3-7554.

BASKETBALL

Carbide Basketball League play is completed for the 1971-72 season. The GBUs of the Atomic League won both the league play and their tournament play. Other teams finished in this order: Computes, CC 69'ers, Shoestrings, Uclans, Isomets, Bottlenecks, James Gang, Bombers, TAT Playmakers, TAT Heartbreakers.

In the Nuclear League the Carbide Trojans won league play and the Depleteds won the tournament. Finishing league play behind the Trojans were the Pis-

reaction time, and thinking are also important.

A practical application of this problem occurred in the planning of interstate highway tunnels through the Rocky Mountains. At 11,000 feet the decreased oxygen due to the altitude, the COHb due to smoking and the CO from automobile exhaust required special ventilation to keep the air in the tunnels less than 25 ppm CO.

The "high" or "lift" one gets from smoking tobacco may be relaxing and satisfying, but "flying" most of the time at an equivalent of 5,000 to 10,000 feet and then adding the usual other daily stresses is risky. The "crash" could be fatal.

tols, Depleteds, A-5 Bucks, Energetics, Dunkers, Butterfingers, Deadeyes, Mustangs, Turkeys and Ail Stars.

ORNL BOWLING

The Pour-It-Ons lived up to their name with a 2,954 HCP series in A League. Rolling individual honors were Jim Croley of Pee Wees with a 677 HCP series, Frank Davis of Ten Pins with a 255 HCP game and Bob Forde of Ten Pins with a 213 scratch game.

Remkeys of C League almost swept all honors with their 3,053 HCP series, R. L. Clark's 665 HCP series and D. L. Laughlin's 244 HCP game. R. A. Vandermeer of Beryls prevented the sweep with a 209 scratch game.

In E League play, Do-Dads rolled a 2,918 HCP series. Other honors went to Beeler of Mets with a 620 HCP series, Manley of Woodchoppers with a 230 HCP game and Steele of Woodchoppers with a 205 scratch game.

The Mousechasers and the Pick-Ups split honors in the ORNL Ladies Bowling League. Mousechasers took high series with handicap with a 2,302. Georgia Guinn of Mousechasers rolled high HCP series with a 630 and Sandy Beidel of Pick-Ups high scratch game of 212 and high HCP game of 244.

ORGDP BOWLING

Demons and Pirates of the Wednesday League almost tied for high team HCP series. Demons rolled a 3,036 and Pirates a 3,035. Fred Johnson rolled both the high HCP series with a 646 and high HCP game with a 262.

In the Tuesday League D. Ducay of the Braves cornered all honors. He rolled a 225 high scratch game, a 243 high HCP game and a 681 HCP series.

TABLE TENNIS

Loyd Wyatt still leads the X League, with 17 wins, 4 losses, closely followed by Roy Huddleston, 16-5. Herb Mook is in third place . . . 15-6.

In the Y League Al King is one game ahead of Gordon Brewer and Jerry Goldstein. He has a 16-5 record . . . while the number two men have a 15-6 card thus far.

Y-12 BOWLING

Y-12's Mixed League looks like it may go right down to the wire. Three teams, the Cougars, Alley Cats and Roses 'n Thorns, are locked in deadly struggle, all on top of standings. Only one-half point behind are the Rollers, who capped the league's first half.

Dick Huber rolled a 242 game recently, helping his Badgers to stay atop C League racing. They are three points ahead of the Mini Strikes, who stay out front one game ahead of the Sunflowers. The Badgers recently posted a 3,030 handicap series!

The Eightballs stand highest in Classic Bowling, three out in front of the All Stars. The Bumpers' Halsey and the Splinters' Johnson hold top spots right now with a 246 scratch game each.

DIVIDEND DECLARED

The board of directors of Union Carbide Corporation has declared its 219th dividend. The amount is 50c a share on outstanding capital stock and is payable March 1.

0645-72



CONGRATULATIONS, CHAMP—Mary Ellen Smith, Information Division, took all events and all events with handicap in the Annual City Tournament which ended February 6. Her scratch total of 1643 and handicap of 1850 for nine games brought her the titles and accompanying trophies of city champion and tournament champion.

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Manly To Address ASM Dinner Meet

William D. Manly, a vice president of Cabot Corporation and current vice president of the American Society for Metals, will



Manly, who is well known locally, joined the Oak Ridge National Laboratory in 1949 after graduating from the University of Notre Dame with a M.S. in Metallurgy. While at the Laboratory, Manly held many administrative positions and was eventually appointed manager of Materials Research for Union Carbide Corporation. In 1965 Manly joined the Stellite Division of Union Carbide at Kokomo, Ind., as Director of Technology and became vice president and general manager of the Stellite Business Center in 1969. In 1971 after the Stellite Division was purchased by the Cabot Corporation, Manly was appointed to his present position as vice president for the Engineered Products Group of Cabot Corporation.

Manly is a member of numerous professional organizations and a fellow of ASM and the American Nuclear Society. He has served on several U. S. Atomic Commission technical teams, as chairman of the AEC's Advisory Committee on Reactor Safety and as a consultant to the President's Science Advisory Committee.

Manly is a member of numerous professional organizations and a fellow of ASM and the American Nuclear Society. He has served on several U. S. Atomic Commission technical teams, as chairman of the AEC's Advisory Committee on Reactor Safety and as a consultant to the President's Science Advisory Committee.

St. Pat's Dance Planned By ORNL's ChemTech

Chemical Technology Division will hold its 22nd annual St. Patrick's Dance on March 17 at the American Legion Hall in Oak Ridge. The social hour begins at 8 p.m. with refreshments provided at no charge. Then there's dancing from 9 p.m. to 1 a.m. to the music of the Bill Scarlett Band. The intermission program will feature door prizes and special entertainment.

Dance tickets are available from each of the division's section secretaries at a cost of \$3. Come on out to join the fun and celebration.

Corporate Sales

(Continued from Page 1)

Although the pickup in sales thus far has been less than expected, Union Carbide officials believe the domestic economy will improve gradually during the year. Consequently, the company looks for increased sales and earnings in 1972.

Construction expenditures in 1971 totaled about \$340 million worldwide, of which \$255 million was spent in the United States and Puerto Rico. In 1972, the total is expected to be between \$300 and \$325 million. The principal reason for the lower construction estimate for 1972 is that the Puerto Rican petrochemicals project is nearing completion, and consequently expenditures there will be significantly less than in 1971.

To be without friends is a serious form of poverty.

CLARK CENTER RECREATION PARK

DECAL APPLICATION

NAME	BADGE NO.
PLANT	BLDG. AND ROOM NO.
HOME ADDRESS - STREET	
CITY	
NO. OF DECALS NEEDED (ONE PER VEHICLE)	
VEHICLE LICENSE NO.(S)	
UCN-8734 (123 7-68)	

New Decals Will Be Needed At Recreation Area May 31

New auto decals are being issued by which employees may gain entrance to the Clark Center Recreation Park. They will replace the old blue and silver stickers that merely say: "CCPR."

The new decals are orange. They may be obtained by filling out the application appearing above. Decals will be issued only for the vehicles registered in an employee's name. Be sure that your license plate number is shown on the application. Also make sure that your plant address is complete, plant, building number and mail stop. The decals will be either mailed to the employee's home, or to his plant address.

Mail the completed entry form to the ORNL Recreation Office, Building 4500N, K-113. The plant mails may be used for the application.

Both old and new decals will be honored through Memorial Day weekend, May 31. After that date, only the new orange decals will be honored. Vehicles with the old blue decals only will not be admitted.

The decals are stuck to the right front bumper of the vehicle. (The Recreation Department requests that decals on vehicles that are being sold or traded be destroyed.)

The Clark Center Recreation Park is limited to employees of Union Carbide Corporation, local Atomic Energy Commission employees, Oak Ridge Associated Universities employees, and employees of the Agricultural Research Laboratory of UT.

Quality Control Clinic is Set at UT, March 10, 11

The 13th Annual Quality Control Clinic will be staged at The University of Tennessee University Center, March 10, 11. Sponsored by the Middle, Northeast and Tennessee Sections of the American Society for Quality Control, the program will run concurrent with training sessions to be conducted by the Department of Statistics at UT.

The clinic is sponsored jointly by the College of Business Administration through the Department of Conferences and Institutes, Division of Continuing Education.

The theme is "Quality through Communication."

'Puss in Boots' Puppet Show Set in Oak Ridge

The magic world of "The Remarkable Mr. Puss in Boots" comes to life on Monday and Tuesday, March 27, 28, when the world-famous Nicolo Marionettes come to town.

"Mr. Puss" is an hilarious marionette version of the French classic by Charles Perrault. Lavishly staged, the charm and wit of this famous classic is captured by the marionettes who sing and dance their way through a story of fun and fantasy.

The Association for Childhood Education is sponsoring the puppet show which will be seen at 4 High School. Tickets are on sale at Overton's Drug Store and Bruner's and Jackson Square Pharmacy, Oak Ridge.

EXCESSIVE SPEED

More than 39 percent of all traffic fatalities in 1970 were due to excessive speed. Speeding accounted for 17,700 persons killed and 988,000 injured last year.

CALENDAR OF EVENTS

TECHNICAL

March 10

Fourth Annual Symposium on Advanced Analytical Methods for the Clinical Laboratory: East Auditorium, Building 4500N, 9:20 a.m.

March 13

Reactor Division Seminar: "Producing Hydrogen from Water," James E. Funk, College of Engineering, University of Kentucky. East Auditorium, Building 4500N, 10:30 a.m.

March 15

Chemical Technology Division Seminar: HTGR Fuel Preparation: "Sol-Gel UO₂ Spheres," B. C. Finney; "Uranium Leading of Resin Beads," K. J. Notz and P. A. Haas. Central Auditorium, Building 4500N, 3 p.m.

March 17

Reactor Division Seminar: "Organization and Activities of the ORNL Planning Group," C. C. Burwell. Large Conference Room, Building 9204-1, 3 p.m.

March 21

Molten Salt Reactor Program Information Meeting: East Auditorium, Building 4500N, 9 a.m.

March 22

Chemical Technology Division Seminar: "Laboratory Development of the Iodex Process," G. I. Cathers; "Corrosion Studies in Systems Containing Iodine," G. E. Creek. Central Auditorium, Building 4500N, 3 p.m.

Metals and Ceramics Division Seminar: "Fabrication Parameters for Thoriated Tungsten," Frank Nair, Thermo-Electron Corporation, Waltham, Mass. East Auditorium, Building 4500N, 2:30 p.m.

March 23

ORNL Seminar Series on Energy Policy Issues: Michael McCloskey, executive director of the Sierra Club. Central Auditorium, Building 4500N, 3 p.m.

March 28-29

Mathematics Division Information Meeting: Oak Ridge National Laboratory.

COMMUNITY

March 10

Oak Ridge Playhouse presents "A Perfect Gentleman." Oak Ridge Playhouse, 8:20 p.m. Admission: Adults \$2.50; students \$1.25 (all Fridays). Other performances March 11, 17, and 18.

March 11

Oak Ridge Civic Music Association presents "Bach's Uncle." Oak Ridge High School auditorium, 8:15 p.m. Admission: Adults \$4; students \$2.

March 12

Oak Ridge Civic Music Association Coffee Concert. Grove Center A & B Rooms, 8:15 p.m. Admission free.

March 14

Carbide Camera Club Meeting: Illustrated talk on the transition from amateur to professional photography, Clyde Hinse and Cliff Johnson. Cheyenne Hall, 7:30 p.m.

March 16

Art Center Slide Lecture "The Easter Story in Art." 7:30 p.m. Admission free.

March 19

Art Center Film Club presents "Tristana" (Spain, 1970). Jefferson Jr. High School, 8 p.m. Admission: Adults \$1.50; students \$1.

March 25-26

Oak Ridge Junior Playhouse presents "Mr. Poppers' Penguins." Playhouse, Jackson Square, 1 and 3 p.m. Admission: \$4.75.

March 27, 28

The Oak Ridge Branch of the Association for Childhood Education is sponsoring the marionette play, "The Remarkable Mr. Puss in Boots," produced by The Nicolo Company. Two performances each day, 4 and 7 p.m.